MOVIEtube ST Quick Guide

Version 05.03.06 / JK

The MOVIEtube ST is an upgraded Version based on the MOVIEtube LT.

The up and downgrade procedure can be completed within 10 minutes by using simple tools.

The MOVIEtube ST is a top of the line version for small video cameras and is equipped with following accessories:

- An integrated Sony/ Panasonic tripod plate compatible shoulder set for living camera moves
- Three WALTERgrip handles for low shots and handheld action
- A socket for use with Sony/ Panasonic compatible professional viewfinders to provide a sharp image for controlling the focus
- Standard Arri connectors for wireless follow-focus, wireless image transmitter and all the other Arri accessories such as a focus control monitor etc.
- Standard video rods for video accessories
- 35mm rods for connecting matteboxes and accessories

Adjustment and fixation of the docking cameras correspond with the MOVIEtube LT (see MOVIEtube LT manual).

Handling and Ergonomics

Handling features are also suitable for shoulder operation.

The Quick release Plate – compatible to Panasonic and Sony - guarantees a safe installation on and removal from the tripod.

The ergonomic and high-resolution b/w viewfinder enables an optimal focus control at any time, even under bad light conditions.

Very important !!!
To carry the camera system please use only the handle grip of the MOVIEtube ST. Never use the handle bar of the docking camera.

For shoulder operation please observe the following: the MOVIE*tube ST* is placed in front of you, lens left hand, battery right hand side.

Grip the top handle of the MOVIE*tube* with your right hand from below and behind and lift it onto your right shoulder. Support it from the side with your left hand on the front camera handle.

When securely on shoulder, the right hand can release the upper handle grip to hold the second front handle grip. With your left hand you can control the focus.

In addition, the BW viewfinder can be adjusted in three axis to the cameraman's eye position.

Power supplies and outputs

A 14.4 Volt Lithium Ion V-Mount Battery, back shoulder mounted, supplies the view finder with power as well as the video distributors and the electronics.

There is a fuse (8A/T, 5x20mm) inside the battery plate. This fuse blows in case of an electrical short. A spare fuse is enclosed. To change the fuse, release the 4 screws and lift off the battery plate. You'll find a fuse holder as well as a spare fuse.

The battery is extendible up to a distance of 100mm from the body, which counterbalances heavy lenses allowing the whole camera system to fit comfortably on the shoulder.

In addition to the viewfinder socket the following connectors are available:
3 Video out: 1 BNC, 2 Fischer
12 Aux PWR out (36Wmax) with Fischer Connector 11-Pin

Many extra devices such as a wireless follow focus and a wireless image transmitter can be connected by high quality Fischer connectors. The Data sheet provides information about technical details.

To convert the docking camera's video signal into the MOVIEtube, please use the Y/C Output with a component splitting cable and feed only the Y-signal to the composite video cinch input of the MOVIEtube ST electronic module. This prevents a disturbing colour graining in the b/w viewfinder.

Accessories

The 15mm rods on the MOVIEtube ST are extendible by screwing an extension rod on or off.

The front WALTERgrip system for 15mm Rods are easily adjustable in 360° to the ideal position by the quick release skewers allowing quick attachment of the GRIPbase to the rods. Hand grips are adjustable at the side.

Each WALTERgrip has two extra 3/8“ thread for further accessories.

Grips can be removed quickly for low shots and packing. 90° (to camera axis) grip mounting position.

In addition to the 15mm rods a 19mm rods interface comes with the MOVIEtube ST to support heavy zoom lenses and, for example, 6x6 matteboxes.

Imaging & Focus

On the left side of the image tube there is a hook on the image plane for fastening a tape measure. The wider the iris is opened the more the depth of field is decreased. The depth of field and viewing angle corresponds to the super 35mm format.*

Specifications

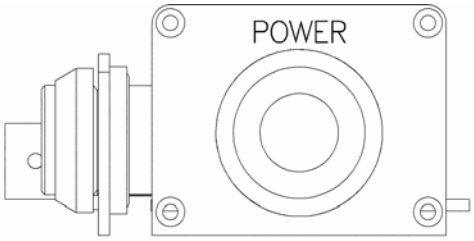
	MOVIEtube ST (Super Tube)
Lens Mount	Arri PL, Panavision PV, Mitchell BNC-R & Stills lenses
Docking Bridge	to attach to various video cameras
Gate/ Frame	scalable S35mm/ Upright, Emulsion up
Weight	11.9 lbs. / 5.4 kg w/o Docking Camera, battery & viewfinder
Power requirements	DC 13.5V-17.0V
Power consumption	6W with Sony DXF-801 Viewfinder
Operating temperature	32°F-122°F / 0°C-50°C
Intermediate Image	static, found at infinity
Measurements	L:12.4”; W:6.7”; H:9.8” L:315mm; W:170mm; H:250mm
Electronic connectors	4 Video Out: 1 VF, 1 BNC, 2 Fischer 12V AUX PWR out (36W max.): Fischer 11-pin 14,4V power in: Fischer 2-pin; Video in: FBAS-Chinch

Specifications are subject to change without notice

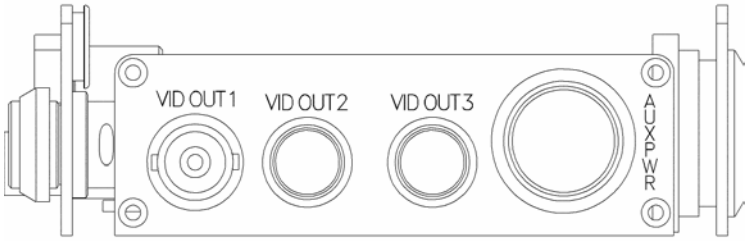
** The primary goal while developing the film screen was not only to produce a video frame with less depth of field, but to create a truly film-like image on video. The MOVIEtube image reproduces the look and feel of true 35mm film emulsion as well as 35mm depth of field. It is warm and smooth with high detail resolution and no digital video coldness.*

Electronic Connectors

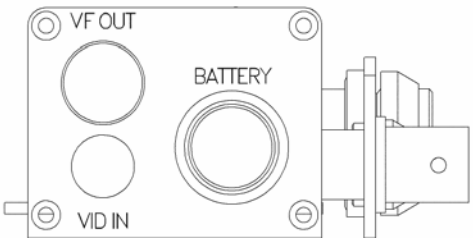
- Illuminated on/off switch (POWER)



- 12V Arri-compatible
- (AUX PWR) out Fischer 11-pin
- Video out (VID OUT)1 BNC, 2 Fischer 4-pin with 12Vpower for monitoring etc.



- 12V power in (BATTERY) Fischer 2-pin
- Video in (VID IN) Composite-Cinch
- Viewfinder out (VF OUT) for Sony & Panasonic compatible professional viewfinders



DOCKING Cameras

The intermediate image is found at infinity, to enable easy focusing of the docking cameras without additional close-up lenses.
Simply attach the docking camera on the dockingsled, tighten the 1/4” thread screw and adjust the quick release handle, while making further adjustment to the lens.

MOVIEtube Approved Docking Cameras:
Sony: HDR-FX1/ HVR-Z1, PD100, PDX10, PD150/ 170,
VX1000/ 2000/ 2100, TRV890/ 900/ 950,
Canon: XM2, MVX3i*
Panasonic: MX3000*, DVX100, NVGS400* HDX200
JVC: HD10U, DV300U*, PD1*

Other cameras approximately the size of the cameras mentioned above should work.

LENS mount

Cinematography lenses from Arri PL, Panavision PV & Mitchell BNC-R, as well as photo lenses from Nikon, Canon FD, Minolta MD,
Pentax K, Pentax M42 Screw, Zeiss-Contax, Leica-R and Yassica/ Olympus OM can be used with the appropriate lens mount. To change the lens mount, release it by turning the Mtbayonett ring counter clockwise. The ring is found on the very front of the image tube near the film plane.

Attention!

- To carry the camera system please use only the handle grip of the MOVIEtube ST. Never use the handle bar of the docking camera.
- Never open the red sealed screws or remove the protective glass inside the image tube. That voids your guaranty!!!
- We found some differences between Panasonic and Sony Camera models. For some models you need a longer screws for example use ¼ “ Manfrotto screws. Attention: If you use a longer screw in a shorter ¼ “ camera mount you may brake through the mount and damage the electronic of the camera. In that case shorten the screw while using a washer between the screw head and the bottom of the camera mounting cable
- Don’t remove both bars at once while being attached to the tripod plate. The MOVIEtube may fall down. Understand that the bars are connecting the Main-unit with the Shoulder/ Support-unit.
- Never use Lenses with a rear element length (measured from bayonet flange to the far end) of more than 32mm. Using Lenses longer than 32mm breaks the protective glass.
- Do not short the battery or the electronic module’s in- and outputs.

12 Golden Rules for shooting in MOVIEtube™

1. Perform a Gate check frequently

Check for dust and dirt on the filter behind the film lens inside the MOVIEtube. Use a lens brush and/ or an air duster. Don't scratch on the surface. Do it in clean environment. Confirm it by panning over bright background, like a white card, will watching the image on the Viewfinder or Monitor

2. Watch T-stop on Film lens

The film lens shouldn't be closed more than T=3.0. Best results can be achieved with open aperture on high speed lenses (T=1.3) Notice that the more open the film lens, the less depth of field you will get.

3. Watch out for grain

Check each shot for grain. If you are filming with white and bright background and doing slow Camera movements with T-Stop down at 3.0, the grain of the Filmscreen may become visible. In that case fully open the aperture or avoid the bright background or the movement.

4. Zooming Gate.

Since zooming closer than the S-35mm gate will capture a closer area the grain will slightly increase. While filming with movements (pan, tilt, travel…) fully open the aperture on your high speed lenses to T=1.3. Also notice that zooming too close will close down the docking cameras aperture even more and you'll loose overall sensitivity.

5. Check for Gate-Vignetation

Make sure zoom is set to manual and your Docking Cameras zoom ring is fixed with tape at focal length 25mm on Sony HDV-Z1/ FX1. Frequently check if everything is still as it should be. Important: Check for vignetation with an underscan broadcast viewfinder (MOVIEtube ST) or with a control monitor set to underscan mode.

6. Docking Camera is set to infinity focus

Make sure, the docking camera's focus is set to infinity by pressing the infinity button. An infinity symbol will appear in the docking cameras viewfinder. This will set the back focal length of the docking camera to the right amount. Switch focus to manual and tape the focus ring.

7. Docking Camera image stabilizer turned off

To avoid the gate shifting into your image, image stabilizers like Steady-Shot or IOS have to be switched off.

8. Docking Camera sensitivity

To shoot with the highest possible sensitivity, open the Iris completely. Consider shooting with shutter speed 1/25 for cinematically look and increasing the sensitivity by 1 Stop. Also 6db gain will raise 1 Stop. HD Video can handle high gain, due to it's high resolution. Even 12db looks very good. Remember shooting with celluloid? A 800 ASA film has a lot of grain and it looks good. Don't be afraid to use gain, check it out. Use it as a tool, like choosing different film sensitivity.

9. Progressive 25p, Cine Gama & other settings

Progressive mode (25 full frames/ sec) can support the film look. Nevertheless it's lowering the overall sensitivity of your system. In that case better use 1/25 shutter interlaced and do the rest in postproduction. Since the MOVIEtube Filmscreen is design to achieve film look with video, the image has a warm film-like, not to colourful appearance. Check Cine Gama and other film presets on your docking camera with MOVIEtube. You might not need it. Also check the colour temperature of your image; sometimes you may do a white balance.

10. Confirm the record turned on

Don't forget to start the docking camera by pressing the record button. If possible establish a voice command like "Speed" or "Running" to avoid shooting without recording.

11. Grey Filters

If you have to deal with high light energy while shooting exteriors, use the docking cameras build in grey filters. Don't stop the film lens down more than T=3.0. To prevent seeing any dust on the outside of the ocular and a vertical black line from the prism, don't close the aperture of the docking camera more than f3.0-4.0. Use "real" grey filters in a Mattebox in front of your film lens, if the build in grey filters is not enough. For shooting documentaries, you may need auto iris. Just limit the auto iris in the menu to not closer than f4.0.

12. Only use tested Equipment.

Before shooting your first takes test your equipment like docking camera, lenses, matteboxes, filters, follow focus. Especially check the lenses for overall sharpness/ quality and for breathing (little zooming while changing focus). Wider lenses are softer than long lenses above F40mm and tend to dark corners. Test Photo lenses, especial zoom lenses for holding focus while zooming. Also if a lens causes vigneting it may be a 35mm regular gate lens only, or the lens is not centred properly anymore (old, damaged etc.) In that case just slightly zoom the gate. 16m lenses may work, but are not recommended. Lenses which measures more than 32mm from the bayonet flange to the last lens element are not recommended. Attention: The may crash the protection filter. Zoom lenses with the iris diaphragm near the bayonet flange, such as Cooke T3.0 18-100, T3.9 25-250 and T3.1 20-100, are not supported.